



# **Channabasaveshwara Institute of Technology**

(Affiliated to VTU, Belgaum & Approved by AICTE, New Delhi)

**(ISO 9001:2015 Certified Institution)**

NH 206 (B.H. Road), Gubbi, Tumkur – 572 216. Karnataka.



# **Web Programming Laboratory [21CSL481]**

**Department of Computer Science & Engineering**

**IV Semester**

**Academic Year : 2022-23**

1. Write a HTML program for the demonstration of Lists.
2. Write a HTML program for time-table using tables.
3. Write HTML for demonstration of cascading stylesheets.
4. Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient.
5. Develop and demonstrate a HTML5 file that includes JavaScript script that uses functions for the following problems:
  - Parameter: A string
  - Output: The position in the string of the left-most vowel
  - Parameter: A number
  - Output: The number with its digits in the reverse order
6. a. Write a Javascript program for validating REGISTRATION FORM.  
b. Write a Javascript program to validate USER LOGIN page.
7. Write an XML for student information and access second students data using DOM.
8. Write a Javascript program for implementing constructor
9. Write a Javascript to add items in a blank array and display the items
10. Write a Javascript program for implementing pattern matching.

<b>Lab Exercises</b>	
1.	Write a HTML program for the demonstration of Lists. <ul style="list-style-type: none"> <li>a. Unordered List</li> <li>b. Ordered List</li> <li>c. Definition List</li> <li>d. Nested List</li> </ul>
2.	Write a HTML program for demonstrating Hyperlinks. <ul style="list-style-type: none"> <li>a. Navigation from one page to another.</li> <li>b. Navigation within the page.</li> </ul>
3.	Write a HTML program for time-table using tables.
4.	Write a HTML program to develop a static Home Page using frames.
5.	Write a HTML program to develop a static Registration Form.
5.	Write a HTML program to develop a static Login Page.
6.	Write HTML for demonstration of cascading stylesheets. <ul style="list-style-type: none"> <li>a. Embedded stylesheets.</li> <li>b. External stylesheets.</li> <li>c. Inline styles.</li> </ul>
7.	Write a javascript program to validate USER LOGIN page.
7.	Write a javascript program for validating REGISTRATION FORM
8.	a. Write a program for implementing XML document for CUSTOMER DETAILS.
8.	b. Write an internal Document Type Definition to validate XML for CUSTOMERDETAILS?
8.	c. Write an external Document Type Definition to validate XML for CUSTOMERDETAILS?
9.	Write an XML for person information and access the data using XSL.
10.	Write an XML for student information and access second students data using DOM.

**1. Write a HTML program for the demonstration of Lists.**

**a. Unordered List**

**b. Ordered List**

**c. Definition List**

**d. Nested List**

**Unordered List:**

```
<html>
<head>
  <title> Creating Unorder List </title>
</head>
<body bgcolor="pink">
  <h1 align="center"> Creating Unorder List</h1>
  <h1 align="center">List of Colleges in Karnataka</h1>
<ul type="square">
  <li>CIT Gubbi</li>
  <li>SIT Tumkur</li>
  <li>NITTE MEENAKSHI Banglore</li>
</ul>
</body>
</html>
```



---

### **Ordered List:**

```
<html>
<head>
<title> Creating Order List </title>
</head>
<body bgcolor="pink">
<h1 align="center"> Creating Order List</h1>
<h1 align="center">List of branches in CIT GUBBI</h1>
<ol type="A">
    <li>CSE</li>
    <li>ISE</li>
    <li>ECE</li>
    <li>EEE</li>
    <li>CIVIL</li>
    <li>ME</li>
    <li>AIDS</li>
</ol>
</body>
</html>
```

---

---

**Definition List:**

```
<html>
<head>
<title>Creating Definition List</title>
</head>
<body bgcolor="pink">
  <h1 align="center">Definition List</h1>
  <dl>
    <dt>CSE<dd>Computer Science & Engineering
    <dt>ECE<dd>Electronics & Communication Engineering
    <dt>IT<dd>Information Technology
    <dt>EEE<dd>Electrical & Electronics Engineering
    <dt>CE<dd>Civil Engineering
  </dl>
</body>
</html>
```

---

---

### Nested List:

```
<html>
<head>
<title>Nested Lists</title>
</head>
<body bgcolor="pink">
<h1 align="center">List of Colleges in Karnataka</h1>
<ol>
<li>Karnataka</li>
<ul>
<li>CIT Gubbi</li>
<li>SIT Tumkur</li>
<li>SSIT Tumkur</li>
</ul>
<li>Bangalore</li>
<ul>
<li>BMS</li>
<li>NITTE</li>
</ul>
</ol>
</body>
</html>
```

---

## 2. Write a HTML program for time-table using tables.

```
<html>
<head>
  <title>Time Table</title>
</head>
<body bgcolor="skyblue">
<H1><FONT COLOR="DARKCYAN"><CENTER>IV SEMESTER TIME
TABLE<br>COMPUTER SCIENCE AND ENGINEERING</FONT></H1>
<table border="2" cellspacing="3" align="center">
<tr>
  <td align="center">TIME/DAY</td>
  <td>9:00AM-10:00AM
  <td>10:00AM-11:00AM
  <td>11:15AM-12:15PM
  <td>12:15PM-1:15PM
  <td>2:00PM-3:00PM
  <td>3:00PM-4:00PM
  <td>4:00PM-5:00PM
</tr>
<tr align="center">
  <td>MONDAY</td>
  <td>21CSL481</td>
  <td>21CS44</td>
  <td>21CSL481</td>
  <td>21CS41</td>
  <td colspan="2">21CSL46</td>
  <td></td>
</tr>
<tr>
  <td align="center">
  <td>TUESDAY</td>
  <td>21CSL481</td>
  <td>21CS42</td>
  <td>21CS41</td>
  <td>21CS43</td>
  <td colspan="2">21CS42</td>
  <td></td>
</tr>
<tr align="center">
  <td>WEDNESDAY</td>
  <td>21CS41</td>
  <td>21CS42</td>
  <td>21CS44</td>
  <td>21CS42</td>
```



```
<td colspan="2">21CS43</td>
<td></td>
</tr>
<tr align="center">
<td>THURSDAY</td>
<td>21CS43</td>
<td>21BE45</td>
<td>21CS44</td>
<td>21UH49</td>
<td>21CS41</td>
<td>PROCTOR MEETING</td>
<td>Scheduled Activity<br>4:30PM to 6:00PM</td>
</tr>
<tr align="center">
<td>FRIDAY</td>
<td>21CS44</td>
<td>21BE45</td>
<td>21CIP47</td>
<td>21CS43</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr align="center">
<td>SATURDAY</td>
<td colspan="7"></td>
</tr>
</body>
</html>
```

**3. Write HTML for demonstration of cascading stylesheets.**

**d. Embedded stylesheets.**

**e. External stylesheets.**

**f. Inline styles.**

**Embedded stylesheets:**

```
<html>
  <head>
    <title>Embedded Style sheets</title>
    <style type="text/css">
      body
      {
        background-color: pink;
      }
      h1
      {
        color:orange;
        text-align: center;
      }
      p
      {
        font-family: "TimesNew Roman";
        font-size: 20px;
      }
    </style>
  </head>
  <body>
    <h1>Embedded Style Sheets</h1><br>
    <p>This is a paragraph
  </body>
</html>
```

**External Stylesheets:****extern.css:**

```
body { background-color: #d0e4fe;}
h1 {
color: orange; text-align: center;
}
p {
font-family: "Times New Roman"; font-size: 20px;
}
```

**extern.html:**

```
<html>
<head>
<title>External Style Sheets</title>
<link rel="stylesheet" type="text/css" href="extern.css">
</head>
<body>
<h1>External Style Sheets</h1><br>
<p>This is a paragraph
</body>
</html>
```

## Inline styles:

```
<html>
```

```
<head>
```

```
<title>External Style Sheets</title>
```

```
</head>
```

```
<body bgcolor="pink">
```

```
<h1 style=" color: orange; text-align: center;">Inline Style Sheets</h1><br>
```

```
<p style=" font-family: Times New Roman; font-size: 20px;">This is a paragraph
```

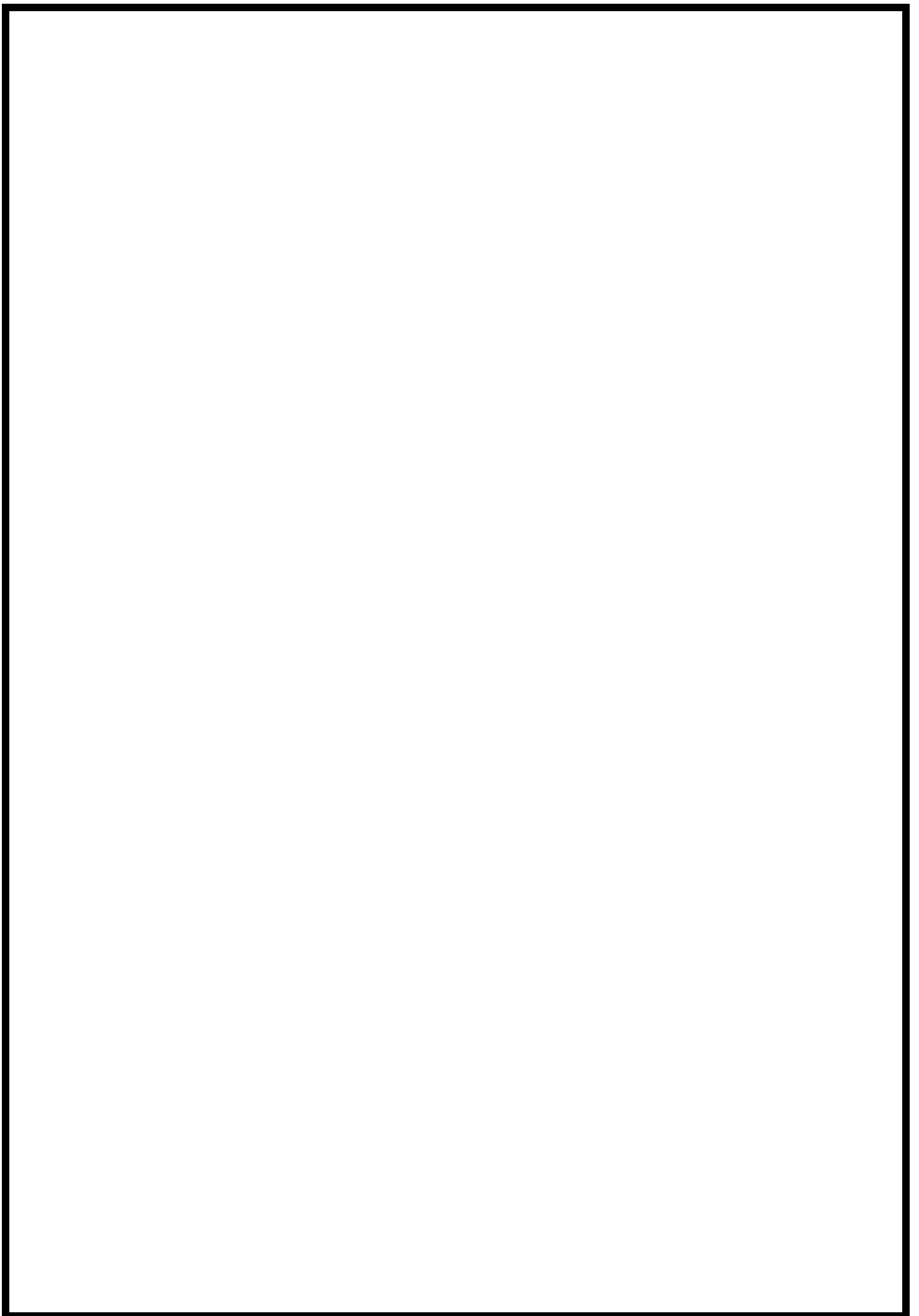
```
</body>
```

```
</html>
```



#### 4. Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient.

```
<html>
<head>
<title>My calculator</title>
<script type="text/javascript">
function call(click_id)
{
var v1=parseFloat(document.getElementById("ip1").value);
var v2=parseFloat(document.getElementById("ip2").value);
if(isNaN(v1) || isNaN(v2))
alert("enter a valid number");
else if(click_id=="add")
document.getElementById("output").value=v1+v2;
else if(click_id=="sub")
document.getElementById("output").value=v1-v2;
else if(click_id=="mul")
document.getElementById("output").value=v1*v2;
else if(click_id=="div")
document.getElementById("output").value=v1/v2;
}
</script>
</head>
<body>
<center>
<h1> A SIMPLE CALCULATOR PROGRAM</h1>
<table style="background-color:yellow" align=="center">
<tr>
<td>
<form method="get" action="">
<div width=50% align="center">
<label>OP1<input type="text" id="ip1"/></label>
<label>op2<input type="text" id="ip2"/></label>
<label>total<input type="text" id="output"/></label>
</div>
<br>
<div width=50% align="center">
<input type="button" value="+" id="add" onclick="call(this.id)"/>
<input type="button" value="-" id="sub" onclick="call(this.id)"/>
<input type="button" value="*" id="mul" onclick="call(this.id)"/>
<input type="button" value="/" id="div" onclick="call(this.id)"/>
<input type="reset" value="clear"/>
</div>
</form>
</td>
</tr>
</table>
</center>
</body>
</html>
```



**5. Develop and demonstrate a HTML5 file that includes JavaScript script that uses functions for the following problems:**

**a. Parameter: A string**

**b. Output: The position in the string of the left-most vowel**

**c. Parameter: A number**

**d. Output: The number with its digits in the reverse order**

```
<!DOCTYPE html>
<html>
  <head>
    <title>vowel & reverse</title>
  </head>
  <body>
    <script type="text/javascript">
      var str=prompt("Enter the input","");
      if(isNaN(str))
      {
        str=str.toUpperCase();
        for(var i=0;i<str.length;i++)
        {
          var ch = str.charAt(i);
          if(ch == 'A'||ch == 'E'||ch == 'I'||ch == 'O'||ch == 'U')break;
        }
        if(i<str.length)
          alert("The position of the left most vowel is "+(i+1));
        else
          alert("No vowel found in the entered string");
      }
      else
      {
        var num, rev=0, remainder;
        num = parseInt(str);
        while(num!=0)
        {
          remainder = num % 10;
          num = parseInt(num/10);
          rev = rev * 10 + remainder;
        }
        alert("Reverse of "+str+" is "+rev);
      }
    </script>
  </body>
</html>
```





```
</script>  
</body>
```

**6.a. Write a javascript program for validating REGISTRATION FORM.**

```
<html>
<head>
<title>JavaScript sample registration from validation </title>
<script type='text/javascript'>
function formValidation()
{
var uid = document.form1.userid;
var passid = document.form1.passid;
var uname = document.form1.username;
var uadd = document.form1.address;
var uzip = document.form1.zip;
var uemail = document.form1.email;
var umsex = document.form1.msex;
var ufsex = document.form1.fsex;
if(userid_validation(uid,5,12))
{
if(userid_validation(passid,7,12))
{
if(allLetter(uname))
{
if(alphanumeric(uadd))
{
if(allnumeric(uzip))
{
if(ValidateEmail(uemail))
{
if(validsex(umsex,ufsex))
{
}
```

---

```
}
}
}
}
}
}
return false;
} function userid_validation(uid,mx,my)
{
var uid_len = uid.value.length;
if (uid_len == 0 || uid_len >= my || uid_len < mx)
{
alert("It should not be empty / length be between "+mx+" to "+my);
uid.focus();
return false;
}
return true;
}
function allLetter(uname)
{
var letters = /^[A-Za-z]+$/;
if(uname.value.match(letters))
{
return true;
}
else
{
alert('Please input alphabet characters only');
uname.focus();
return false;
}
```

---

```
}  
}  
function alphanumeric(uadd)  
{  
var letters = /^[0-9a-zA-Z]+$/;  
if(uadd.value.match(letters))  
{  
return true;  
}  
else  
{  
alert('Please input alphanumeric characters only');  
uadd.focus();  
return false;  
}  
}  
function allnumeric(uzip)  
{  
var numbers = /^[0-9]+$/;  
if(uzip.value.match(numbers))  
{  
return true;  
}  
else  
{  
alert('Please input numeric characters only');  
uzip.focus();  
  
return true;
```

```
}  
}  
function ValidateEmail(uemail)  
{  
var mailformat = /^\\w+([\\.-]?\\w+)*@\\w+([\\.-]?\\w+)*\\.\\w{2,3}+$/;  
if(uemail.value.match(mailformat))  
{  
return true;  
}  
else  
{  
alert("You have entered an invalid email address!");  
uemail.focus();  
return false;  
}  
} function validsex(umsex,ufsex)  
{  
x=0;  
  
if(umsex.checked)  
{  
x++;  
} if(ufsex.checked)  
{  
x++;  
}  
if(x==0)  
{  
alert('Select Male/Female');  
umsex.focus();
```

```
return false;
```

```
else
```

```
{
```

```
return true;
```

```
}
```

```
}
```

---

```
</script>
</head>
<body>
<form name='form1' onsubmit='return formValidation()' >
<table width="500" cellpadding="3" style="border-collapse: collapse;">
<tr>
<td>User id </td>
<td><input type="text" name="userid" size="12" /></td>
</tr>
<tr>
<td>Password</td>
<td><input type="password" name="passid" size="12" /></td>
</tr>
<tr>
<td>Name</td>
<td><input type="text" name="username" size="50" /></td>
</tr>
<tr>
<td>Address</td>
<td><input type="text" name="address" size="50" /></td>
</tr>
<tr>
<td>ZIP Code </td>
<td><input type="text" name="zip" /></td>
```



---

```
</tr>
<tr>
<td>Email</td>
<td><input type="text" name="email" size="50" /></td>
</tr>
<tr>
<td>Sex</td>
<td><input type="radio" name="msex" value="Male" /> Male
<input type="radio" name="fsex" value="Female" /> Female</td>
</tr>
<tr>
<td>Language preference</td>
<td><input type="checkbox" name="en" value="en" checked />English
<input type="checkbox" name="nonen" value="noen" />Non English</td>
</tr>
<tr>
<td>Write about yourself<br>
(optional)</td>
<td><textarea name="desc" rows="4" cols="40"></textarea></td>
</tr>
<tr>
<td>&nbsp;</td>
<td><input type="submit" name="submit" value="Submit" /></td>
<td>&nbsp;</td>
</tr>
</table>
</form>
</body>
</html>
```

**6.b. Write a javascript program to validate USER LOGIN page.**

```
<html>
  <head>
    <title>Login Validation</title>
    <script language="javascript">
      function formValidator()
      {
        var username=document.getElementById('uname');
        var password=document.getElementById('pwd');
        if(isEmpty(username)&&isEmpty(password))
        {
          alert("enter something");
          document.form1.uname.focus();
        }
        if(!isEmpty(username)&&isEmpty(password)&&isAlphabet(username))
        {
          alert("Please enter password");
          document.form1.pwd.focus();
        }
        if(!isEmpty(username)&&!isEmpty(password)&&isAlphabet(username))
        {
          return true;
        }
        else
        {
          if(!isEmpty(username)&&!isEmpty(password)&&!isAlphabet(username))
          {
            alert("Please Enter only alphabets for username");
            document.form1.uname.focus();
          }
        }
      }
    </script>
  </head>
</html>
```

---

---

```
    }
    return false;
  }
function isEmpty(elem)
{
  if(elem.value.length==0)
  {
    return true;
  }
  return false;
}
function isAlphabet(elem)
{
  var alphaExp=/^[a-z A-Z]+$/;
  if(elem.value.match(alphaExp))
  {
    return true;
  }
}
</script>
</head>
<body bgColor=megastar>
  <h1 align=center>USER LOGIN VALIDATION</h1>
  <br><br>
  <form name="form1" onSubmit="return formValidator()">
    <center>
      <table border=0 colsSpacing=4>
        <tr>
          <td>Username:</td>
          <td><input type=text value="" name="uname"></td>
```

---

---

```
</tr>
<tr>
<td>Password:</td>
  <td><input type=password value="" name="pwd"></td>
</tr>
<tr>
<td><input type=submit value="SUBMIT" name="btn1 "></td>
<td><input type=reset value="CANCEL" name="btn2"></td>
</tr>
</table>
</center>
</form>
</body>
</html>
```

**7. Write an XML for student information and access second students data using DOM.**

**Schl.xml:**

```
<?xml version="1.0"?>
<school>
<class>
<class_title>XML</class_title>
<students>
<student>
<firstname>aaa</firstname>
<lastname>bbb</lastname>
</student>
<student>
<firstname>aaa</firstname>
<lastname>bbb</lastname>
</student>
</students>
</class>
</school>
```

**School.html:**

```
<html>
<head>
<title>Accessing XML data</title>
<script type="text/javascript">
function getStudentData()
{
var xmldoc;
xmldoc=new ActiveXObject("Microsoft.XMLDOM");
xmldoc.load("school.xml");
nodeSchool=xmldoc.documentElement;
```

---

---

```
nodeClass=nodeSchool.firstChild;
nodeStudents=nodeClass.lastChild;
nodeStudent=nodeStudents.lastChild;
nodeFirstname=nodeStudent.firstChild;
nodeLastname=nodeFirstname.nextSibling;
message.innerHTML="Name:"+nodeFirstname.firstChild.nodeValue+"
"+nodeLastname.firstChild.nodeValue;
}
</script>
</head>
<body bgcolor="pink">
<center>
<h1>Accessing XML Data</h1>
<div id="message"></div>
<input type="button" value="GET DATA" onClick="getStudentData()">
</center>
</body>
</html>
```

## 8. Write a Javascript program for implementing constructor

```
<!DOCTYPE html>
<html>
<body>
<script>
class CompanyName
{
  constructor()
  {
    this.company="CIT Gubbi";
  }
}
class Employee extends CompanyName {
  constructor(id,name) {
    super();
    this.id=id;
    this.name=name;
  }
}
var emp = new Employee(1,"John");
document.writeln(emp.id+" "+emp.name+" "+emp.company);
</script>
</body>
</html>
```

## 9. Write a Javascript to add items in a blank array and display the items

```
<html>
<head>
<meta charset=utf-8 />
<title>Arrays</title>
<style>
body {padding-top:50px}
</style>
</head>
<body>
<input type="text" id="text1"></input>
<input type="button" id="button1" value="Add" onclick="add_element_to_array();"></input>
<input type="button" id="button2" value="Display" onclick="display_array();"></input>
<div id="Result"></div>
</body>
</html>
<script>
var x = 0;
var array = Array();

function add_element_to_array()
{
array[x] = document.getElementById("text1").value;
alert("Element: " + array[x] + " Added at index " + x);
```



```
x++;  
document.getElementById("text1").value = "";  
}  
  
function display_array()  
{  
    var e = "<hr/>";  
  
    for (var y=0; y<array.length; y++)  
    {  
        e += "Element " + y + " = " + array[y] + "<br/>";  
    }  
    document.getElementById("Result").innerHTML = e;  
}  
</script>
```

## 9. Write a Javascript program for implementing pattern matching.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>JavaScript Match Words Starts or Ends with a Pattern Using Regular Expression</title>
</head>
<body>
  <script>
    var regex = /(\bcar\w*)/g;

    var str = "Words beginning with car: cart, carrot, cartoon. Words ending with car: oscar,
supercar.";

    var replacement = '<b>$1</b>';

    // Highlights the words beginning with car in bold

    var result = str.replace(regex, replacement);

    document.write(result);

  </script>
</body>
</html>
```